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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,084	09/19/2003	Janardhanan Radhakrishnan	010327-008110US	8982

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EXAMINER	
MCCARTHY, CHRISTOPHER S	
ART UNIT	PAPER NUMBER
2113	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/666,084	RADHAKRISHNAN ET AL.	
	Examiner	Art Unit	
	Christopher S. McCarthy	2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22,25 and 27-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12-18,20 and 22* is/are allowed.

6)☒ Claim(s) *1-3,8,10,11,19,21,25,27 and 29* is/are rejected.

7)☒ Claim(s) *4-7,9,28 and 30-34* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *response to arguments*.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 11, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson U.S. Patent 6,963,926 in view of Croslin U.S. Patent 6,327,669.

As per claim 1, Robinson teaches a method for handling failures in a data plane of a plurality of data planes, the method comprising generating a partitioned data structure, wherein the partitioned data structure is generated from a control processor including a failure detector, and the data structure includes one or more partitions for each of the plurality of data planes, each partition including routes for a source data plane to a destination data plane (column 6, line 65 – column 7, line 13, 40-50); sending one or more partitions from the partitioned data structure to a data plane that is the source data plane in the routes (column 8, lines 28-30); detecting a failure in a failed data plane in the plurality of data planes, wherein the failure detector is configured to detect the failed data plane in the plurality of data planes (column 7, lines 40-50); and notifying data planes other than the failed data plane in the plurality of data planes that the failed data plane has failed (column 8, lines 28-30), wherein the notified data planes do not send data for the one or more routes found in a partition associated with the failed

data plane (column 8, lines 28-30, wherein the NA node does not directly send data to the failed ND node, but instead sends notification back to the preceding node NG). Robinson does not teach wherein the control processor is separate from the plurality of data planes. Croslin does teach wherein the control processor is separate from the plurality of data planes (column 4, lines 24-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the centralized control processor of Croslin in the data plane recovery process of Robinson. One of ordinary skill in the art would have been motivated to use the centralized control processor of Croslin in the data plane recovery process of Robinson because Croslin teaches node recovery using routing tables utilizing the most desirable alternative path next (column 4, lines 7, lines 22-25); an explicit desire of Robinson (column 6, lines 4-10).

As per claim 2, Robinson teaches the method of claim 1, wherein one partition includes all routes from a source data plane and to a destination data plane (column 6, line 65 – column 7, line 13).

As per claim 11, Robinson teaches the method of claim 1, further comprising separating each partition in the partitioned data structure (column 6, line 65 – column 7, line 13).

As per claim 25, Robinson teaches a system for handling data plane failures, the system comprising: a plurality of data planes; and a control processor (wherein a processing unit (or even the node as the processing unit itself) is implicitly taught as to control the storage of tables, receiving of messages, and distribution thereof in a node): a receiver configured to received routes for route data, each route specifying source data plane in which data is sent and a destination data plane in which data is received (column 8, lines 28-30, wherein NA receives route data from NB); a failure detector configured to detect a failure in a data plane in the

plurality of data planes (column 7, lines 40-50); a data structure generator configured to generate a data structure that groups the routes by a source data plane for each of the plurality of data planes (column 6, line 65 – column 7, line 13); and a distributor configured to distribute the grouped routes to each associated source data plane (column 86, lines 28-30), wherein the plurality of data planes comprise storage for storing the grouped routes that are received from the distributor (column 5, line 66, wherein it is implicitly taught that a storage means exists if the node stores the tables). Robinson does not teach wherein the control processor is separate from the plurality of data planes. Croslin does teach wherein the control processor is separate from the plurality of data planes (column 4, lines 24-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the centralized control processor of Croslin in the data plane recovery process of Robinson. One of ordinary skill in the art would have been motivated to use the centralized control processor of Croslin in the data plane recovery process of Robinson because Croslin teaches node recovery using routing tables utilizing the most desirable alternative path next (column 4, lines 7, lines 22-25); an explicit desire of Robinson (column 6, lines 4-10).

As per claim 27, Robinson teaches the system of claim 26, wherein the control processor comprises a notifier, the notifier configured to notify data plane of the failure (column 8, lines 28-30).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson in view of Croslin in view of Beshai et al U.S. Patent 6,744,775.

As per claim 3, Robinson teaches the method of claim 1. Robinson does not explicitly teach the method further comprising removing any data partitions that have been received at the data planes that have the failed data plane as the destination data plane. Beshai does teach removing any data partitions that have been received at the data planes that have the failed data plane as the destination data plane (column 13, lines 42-50, wherein routes are tagged/marked as failure routes and will not be used until they are restored; this is consistent with the applicant's specification in paragraph 0040, in that, clearing/removing does not explicitly mean deleting the entries, but can also mean being marked inactive, or, removed from the active state, which is what is implicitly taught by Beshai). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the routing table updating process of Beshai to the routing table updating process of Robinson. One of ordinary skill would have been motivated combine the routing table updating process of Beshai to the routing table updating process of Robinson because Beshai teaches the reconfiguration of the routing tables upon a failure therein (column 13, lines 42-50), an explicit desire of Robinson (column 8, lines 21-28 in the overwriting of invalid routing data); and an explicit desire of Croslin (column 7, lines 22-25, wherein route in formation is sent to the participating node).

As per claim 29, Robinson teaches the system of claim 27. Robinson does not explicitly teach wherein the data planes are configured to remove a partition associated with the failed data

plane upon the notification. Beshai does teach wherein the data planes are configured to remove a partition associated with the failed data plane upon the notification (column 13, lines 42-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the routing table updating process of Beshai to the routing table updating process of Robinson. One of ordinary skill would have been motivated combine the routing table updating process of Beshai to the routing table updating process of Robinson because Beshai teaches the reconfiguration of the routing tables upon a failure therein (column 13, lines 42-50), an explicit desire of Robinson (column 8, lines 21-28 in the overwriting of invalid routing data); and an explicit desire of Croslin (column 7, lines 22-25, wherein route in formation is sent to the participating node)

Allowable Subject Matter

5. Claims 12-18, 20, 22 are allowed.

6. Claims 4-7, 9, 28, 30-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 2, 11, 25, 27, 3, 29 have been considered but are moot in view of the new ground(s) of rejection.

8. Withdrawal of USC 112 rejections has been entered.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. McCarthy whose telephone number is (571)272-3651. The examiner can normally be reached on M-F, 9 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher S. McCarthy
Examiner
Art Unit 2113